

## WHAT IS CLAIMED IS:

1. A method of producing a ligand:receptor complex,  
comprising contacting:
  - 5 a) a substantially pure or recombinant mammalian IL-1 $\delta$   
or IL-1 $\epsilon$  with a receptor comprising the IL-1R6  
receptor subunit; or
  - b) a mammalian IL-1 $\delta$  or IL-1 $\epsilon$  with a receptor comprising  
a substantially pure or recombinant IL-1R6 receptor  
10 subunit;thereby allowing said complex to form.
2. The method of Claim 1, wherein:
  - 15 a) said complex results in modulation of NFkB  
activation;
  - b) said receptor is on a cell;
  - c) said complex formation results in a physiological  
change in the cell expressing said receptor;
  - d) said contacting is in combination with an anti-  
20 inflammatory agent; or
  - e) said contacting allows quantitative detection of said  
ligand.
3. The method of Claim 2, wherein said receptor is on a  
25 skin cell.
4. A method of modulating physiology or development of  
an IL-1R6 receptor expressing cell comprising contacting said  
cell to an exogenous agonist or antagonist of a mammalian IL-  
30 1 $\delta$  or IL-1 $\epsilon$ .
5. The method of Claim 4, wherein:
  - A) said antagonist is:
    - 1) an antibody which:

- a) neutralizes said mammalian IL-1 $\delta$ ; or
  - b) neutralizes said mammalian IL-1 $\epsilon$ ; or
  - 2) a mutein of said IL-1 $\delta$  or IL-1 $\epsilon$ ;
  - B) said physiology is selected from:
    - 1) proliferation;
    - 2) tissue remodeling; or
    - 3) production of inflammatory mediators, including cytokines, chemokines, or adhesion molecules; or
  - C) said modulating is specific for epithelial cells and not endothelial cells.
6. The method of Claim 4, wherein:
- a) said antagonist is an antibody and said physiology is an inflammatory response; or
  - b) said modulating is specific for Th2 cells and not Th1 cells.
7. The method of Claim 4, wherein said modulating is blocking, and said physiology is an inflammatory response.
8. A method of modulating a signal to a cell mediated by IL-1 $\delta$  or IL-1 $\epsilon$  comprising contacting said cell to an administered agonist or antagonist of IL-1R6.
9. The method of Claim 8, wherein said modulating is inhibiting, and said signal is a pro-inflammatory signal.
10. The method of Claim 9, wherein:
- a) said antagonist is a neutralizing antibody to IL-1R6;
  - b) said agonist or antagonist is administered in combination with an antagonist or agonist of CXCR1, CXCR2, or CCR6; or

- c) said agonist or antagonist is administered in combination with a growth factor, cytokine, chemokine, or immune adjuvant.

5 11. The method of Claim 9, wherein said contacting is with another anti-inflammatory agent.

12. A method of selectively labeling a population of cells, said method comprising contacting said cells with an  
10 IL-1R6 antibody or a cytokine selected from IL-1 $\delta$  or IL-1 $\epsilon$ , thereby resulting in the identification of cells expressing IL-1R6.

13. The method of Claim 12, wherein:

- 15 a) said contacting results in modulation of NF $\kappa$ B activation;  
b) said labeling allows purification of IL-1R6+ cells; or  
c) said labeling allows depletion of IL-1R6+ cells.

20 14. A population of cells made by the method of Claim 13.

15. The population of Claim 14, which:

- 25 a) bind anti-IL-1R6 antibody or antiserum; or  
c) are prepared by Fluorescent Activated Cell Sorting with a labeled IL-1R6 selective:  
1) ligand;  
2) antibody; or  
30 3) binding compound comprising the antigen binding portion from an antibody which selectively binds IL-1R6.

16. A method of testing a compound for ability to affect IL-1R6 receptor-ligand interaction, said method comprising comparing the interaction of IL-1R6 with IL-1 $\delta$  or IL-1 $\epsilon$  in the presence and absence of said compound.

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17. The method of Claim 16, wherein said compound is an antibody against IL-1R6, IL-1 $\delta$ , or IL-1 $\epsilon$ .

18. An isolated or recombinant polynucleotide which:

- 10 a) encodes at least 15 contiguous amino acid residues of SEQ ID NO: 2;
- b) encodes at least two distinct segments of at least 8 contiguous amino acid residues of SEQ ID NO 2;
- 15 c) comprises one or more segments at least 21 contiguous nucleotides of SEQ ID NO: 1;
- d) encodes at least 15 contiguous amino acid residues of SEQ ID NO: 4;
- e) encodes at least two distinct segments of at least 8 contiguous amino acid residues of SEQ ID NO 4; or
- 20 f) comprises one or more segments at least 21 contiguous nucleotides of SEQ ID NO: 3.

19. An isolated or recombinant antigenic polypeptide comprising at least:

- 25 a) one segment of 12 identical contiguous amino acids from SEQ ID NO: 2;
- b) at least two distinct segments of 8 identical contiguous amino acids from SEQ ID NO: 2;
- c) one segment of 12 identical contiguous amino acids from SEQ ID NO: 4; or
- 30 d) at least two distinct segments of 8 identical contiguous amino acids from SEQ ID NO: 4.

Variable	Mean	SD	Min	Max
Age	38.5	12.5	25	65
Gender	0.5	0.5	0	1
Marital status	0.5	0.5	0	1
Education	12.5	2.5	9	16
Income	3500	1500	1000	8000
Health status	0.5	0.5	0	1
Exercise frequency	0.5	0.5	0	1
Stress level	0.5	0.5	0	1
Sleep quality	0.5	0.5	0	1
Diet quality	0.5	0.5	0	1
Work-life balance	0.5	0.5	0	1
Family support	0.5	0.5	0	1
Community involvement	0.5	0.5	0	1
Personal growth	0.5	0.5	0	1
Life satisfaction	0.5	0.5	0	1
Overall well-being	0.5	0.5	0	1